

WE CLAIM AS OUR INVENTION:

1. A valve assembly comprising:
a valve body having a valve opening therein;
a force generator energizable to generate a force;
a shaft in operable connection with said force generator so as to be movable
relative to said valve opening dependent on said force to regulate a
degree of opening of said valve opening; and
a bearing assembly guiding said shaft in said movement relative to said valve
opening, said bearing assembly comprising a magnet arrangement
disposed to magnetically suspend said shaft.
2. A valve assembly as claimed in claim 1 wherein said magnet
arrangement additionally magnetically biases said shaft in a direction to regulate said
degree of opening of said valve opening.
3. A valve assembly as claimed in claim 2 wherein said magnet
arrangement magnetically biases said shaft to decrease said degree of opening of
said valve opening.
4. A valve assembly as claimed in claim 2 wherein said magnet
arrangement magnetically biases said shaft to increase said degree of opening of
said valve opening.
5. A valve assembly as claimed in claim 1 wherein said force generator is
an electromagnetic force generator comprising a solenoid coil having a coil axis, said
solenoid coil being energizable to generate an electromagnetic force, and wherein
said shaft is disposed for reciprocal movement in a direction parallel to said coil axis
in response to said electromagnetic force to regulate said degree of opening of said
valve opening.